

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

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IN THE MATTER OF the Application of) REGULATORY DIVISION
Montana Dakota Utilities Company for)
Authority to Establish Increased Rates for) DOCKET NO. D2015.6.51
Electric Service in the State of Montana)

**DATA RESPONSES OF THE MONTANA CONSUMER COUNSEL
TO THE MONTANA PUBLIC SERVICE COMMISSION**

PSC-102

Regarding: AED Allocator
Witness: Wilson

- a. On page 31, lines 10-18, you state, “[a]lthough [the AED] allocator gives some consideration to energy as a capacity cost determinant, it uses non-coincident demand rather than coincident demand to allocate the demand cost component...Class non-coincident peaks (NCP) do not occur at the time of the system peak. Therefore, this choice of allocators results in an allocation of generation and transmission that falls far short of conforming to the principles of cost causality.”

Would an AED allocation method that uses coincident peak demand rather than non-coincident peak demand to allocate excess demand alleviate the MCC’s concerns with respect to the AED methodology MDU has proposed? Please reference the following article for further discussion on such a methodology: Coyle, Eugene P. “Average and Excess Demand Once Again.” *Public Utilities Fortnightly* 24 June 1982: 51-52.

- b. On page 31 of your direct testimony, lines 10-11 you state “...[the AED] allocator gives some consideration to energy as a capacity cost determinant”. And on page 33, lines 14-17 of your direct testimony, you state “The end result of MDU’s average and excess approach is a cost allocation that closely resembles an allocation based solely on monthly coincident peak demands,

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without giving any consideration to energy consumption as a cost causing factor.”

Do you oppose the AED allocation method in general, or simply the end result of MDU’s specific AED allocator?

RESPONSE:

- a. No. I do not advocate the use of AED for the allocation of generation and transmission costs. Regardless of whether CP or NCP is used as the demand component, AED attributes an insufficient share of costs to energy.
- b. See Response to part (a) of this question.

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PSC-103

Regarding: Allocation of Generation and Transmission Capacity Costs
Witness: Wilson

- a. Please provide workpapers and/or data MCC used to support the 12-CP demand for customer classes in its calculation of its proposed 50% energy / 50% demand allocator for generation and transmission capacity costs.

RESPONSE:

- a. Dr. Wilson used the 12 CP demands provided by MDU in response to data request MCC-090 as shown on the Excel File named "Attachment Response PSC-105 - Exhibit JWW-8," tab "demand & energy – AED," column Q.

PSC-104

Regarding: Distribution System Costs
Witness: Wilson

- a. Please specify the costs that you consider to be primary distribution system network costs as referenced on page 47, lines 6-7 in your direct testimony.
- b. Please specify the costs that you consider to fall within the category of local distribution facilities on page 47, line 17 of your direct testimony.
- c. Please describe the attributes of the 'less costly line transformers' that you reference on page 50, lines 16-17 of your direct testimony and explain how you derived the cost for those transformers.
- d. Please provide workpapers, documentation, or a further description of the basis for your estimate of a theoretical distribution system which would be no more than 10 to 25% of the actual system distribution costs that you reference on page 52, lines 10-11 of your direct testimony.
- e. To the extent it is feasible, would the MCC support collecting the distribution facilities costs it has classified as demand-related and allocated on the basis of non-coincident peak demand through a demand charge? Please explain.

RESPONSE:

- a. MDU's distribution plant accounts are not separated by primary and secondary designations. Generally, a portion of Poles, Conductors, Conduit, Rights of Way, and Station Equipment are considered to be primary distribution plant, while Meters, Services and Line Transformers are considered to be secondary plant.
- b. See response to part (a) of this question.
- c. As stated in Dr. Wilson's testimony, a half century ago average distribution line transformers in the industry were about one-third the size (measured in KVA capacity) of today's average transformer, and yet they served an average of 7-8 meters as compared with today's average of about 3-4 meters. Further, pad mount transformers, which MDU uses as a minimum system proxy, are

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- expensive and do not provide an appropriate measure for least costly minimum system costs.
- d. Dr. Wilson does not have workpapers, or documentation for his estimate of a theoretical distribution system which would be no more than 10 to 25% of the actual system distribution costs. This estimated range is based on his prior experience in other cases where more appropriate “minimum system” specifications were available.
 - e. Not necessarily. Generally, demand charges are not practical for small customers (e.g., residential customers) who do not have demand recording metering equipment, which may entail expensive additional plant investment. Also, demand charges are not as effective as energy charges in encouraging economic conservation.

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PSC-105

Regarding: MCC Alternative Cost of Service Study Exhibit__(JWW-8)
Witness: Wilson

- a. If not provided in response to PSC-073, provide an electronic version of the modified embedded cost of service study that supports Exhibit__(JWW-8). (e.g. similar to Statement L).
- b. In the electronic document requested in part a. of this question, please highlight each line item which differs from the Statement L provided by MDU in its application.
- c. In electronic format, please provide supporting workpapers for each allocation factor that differs from the allocation factor contained in Statement L provided by MDU in its application.
- d. Please explain in detail why you believe allocating A&G expenses on the basis of retail revenues is a better allocator for A&G expenses than O&M costs.

RESPONSE:

- a. See Excel File named “Attachment Response PSC-105 - Exhibit JWW-8”, as part of response to PSC-073.
- b. See Excel File named “Attachment Response PSC-105 - Exhibit JWW-8”, as part of response to PSC-073.
- c. See Excel File named “Attachment Response PSC-105 - Exhibit JWW-8.”, tab “Allocation Factors”, as part of response to PSC-073.
- d.
- e. Allocating A&G expenses on the basis of retail revenues is a better allocator for A&G expenses than O&M costs because revenues are fully comprehensive in that they relate to all functions performed by the utility (as is the case for A&G) – not just O&M functions.

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PSC-106

Regarding: Rate Design
Witness: Wilson

- a. On pages 60-67 you seem to recommend restructuring energy charges for all rate classes in order to reflect the marginal cost of energy. On page 67, lines 2-3, you state “efficient electricity pricing should start with energy rates reflecting marginal energy costs for all classes.” Please clarify whether you are referring to short-run or long-run marginal costs and what source the Commission should look to for this information. How does this theory comport with your recommendation that the fixed customer charge for all rate classes should not be increased?
- b. Do you believe a demand charge imposed on all customer classes would send an appropriate price signal to customers and promote fairness among customer classes? If not, please explain why.
- c. On page 64, lines 3-6 of your testimony you state: “Incremental energy costs (primarily the fuel cost associated with one kilowatt-hour more or less at any time) are perhaps the least difficult and least controversial costs to quantify with reasonable accuracy.” Are you recommending that energy charges for all customer classes should reflect only the short-run marginal cost of energy?
- d. On page 66, lines 1-3 of your direct testimony, you state: “In competitive markets prices also tend to reach an equilibrium at a level that covers the total costs of production (including a return to capital investment).” Are you recommending that energy charges for all customers should reflect the long-run marginal cost of energy?
- e. Would it be reasonable to set energy rates for all customer classes based on the on-peak and off-peak, seasonal, marginal energy costs determined in MDU’s marginal cost study, and recover remaining class revenue requirements through other rate elements (customer and demand charges)? Why or why not?

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RESPONSE:

- a. Economically efficient energy rates would never fall below short run marginal energy costs. More generally, rates should be designed to cover long run marginal energy costs when they are higher than short run marginal energy costs. Short run marginal energy costs generally reflect rates charged for short term wholesale purchases. Long run marginal energy costs also include plant costs in excess of the cost of peaking capacity. No increase in fixed customer charges will enable the implementation of energy rates that come closer to marginal energy costs.
- b. No. As Dr. Wilson has testified, efficient price signals are, by far, much more important for marginal energy costs than for demand costs. Customers can respond directly to energy price signals telling them the incremental (fuel or purchased power) cost of an increase or decrease in kwh consumption. In contrast, they have little or no ability to alter demand in response to changes in per customer rates. In a similar sense, capacity costs (whether generation, transmission or distribution) are more or less fixed in the short run and it is therefore far more difficult to design and implement efficiency inducing price signals for these cost components. In short, efficient electricity pricing should start with energy rates reflecting marginal energy costs for all classes.
- c. No. See response to part (a) of this question.
- d. Yes; however, energy rates should never fall below the short run marginal cost of energy. See response to part (a) of this question.
- e. No. MDU's marginal cost study does not properly reflect the long run marginal cost of energy. Please see responses to parts (a) and (b) of this question.

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PSC-107

Regarding: Rate Design
Witness: Wilson

- a. If the Commission does not accept your recommendation to impose any potential rate increase on only the class energy charge, how would you recommend the Commission determine an appropriate increase to the fixed basic service charge and/or the demand charge to customer classes?

RESPONSE:

- a. I have no alternative recommendation. There is no good alternative to the Commission establishing rates that provide efficient price signals to customers. Please see responses to parts (a) and (b) of PSC-106.